Hoosier National Forest Happenings

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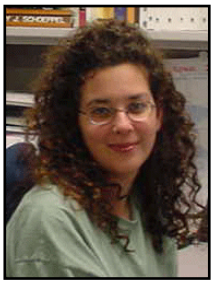

Using a GIS to 'Care for the Land and Serve People'

By: Mary Schoeppel, Resource Information Specialist, Hoosier National Forest

Before technology and computers came along, resource specialists had to hand sketch maps or trace information. Records were kept by coloring features on topographic maps to create atlases and by recording information on paper forms to be filed away in cabinets. Querying to find something was basically paging through vast amounts of paper. There was no easy way to get a landscape view of information. All that changed with GIS.

What is a GIS?

GIS stands for Geographic Information System. It brings information together with a location. For example, not only can Forest streams be mapped, but clicking on a stream segment electronically tells us the stream name, length, and in what watershed it lies. GIS information is used to make maps and find features, allowing for either site specific or landscape area decisions.

What makes up a GIS?

GIS is a collection of hardware, software, methods, data, and people. Hardware includes computers, data recorders, scanners, digitizers, printers, and cameras. Software includes various commercial and Forest Service products allowing data to be stored, manipulated and retrieved. Data includes points, lines, and polygons of various layers such as streams, roads, ownership, photos, or electronic inventories. By far, people are the most important aspect of a GIS. Forest resource specialists use GIS to store and map information, and design models using the information. Ultimately, people make the decisions and determine whether or not a model is valid, results are accurate, or whether the answer makes sense on the ground.

More than maps

GIS enables Forest staff to look for

patterns and relationships. It is a tool supporting land management decisions based on field data that can be modeled and manipulated to analyze different outcomes. Maps where one resource is overlaid on another can reveal potential resource conflicts. For example, a map showing the proximity of roads to streams allows resource managers to plan mitigation measures to protect all resources. Placing a buffer at various distances between the road and stream helps in deciding how far away from the stream road construction needs to be to minimize soil and water impacts.

Modeling using GIS analysis saves time in determining the best location for management activities. An example is re-routing a trail. GIS analysis can consider such factors as slope percent, land ownership, and stream crossings. With this information, the potential re-route can be generated in three dimensions providing realistic views of the situation on the ground and options for re-route locations.

Managing the Hoosier's GIS

GIS began on the Hoosier in the 1990s and continues to expand with additional data, refinements, and analyses. Every resource specialist from soil scientists to planners uses the system which covers the nine counties that encompass the Forest. The Hoosier's GIS is also linked to other state agency land data.

Did you know?

There is a GIS day! It is celebrated during Geography Awareness Week, the third week in November, and provides a forum for users of the technology to demonstrate how GIS makes a difference in our society. For more information, go to www.gisday.com.

Contact Information

For additional information about the Hoosier's GIS program, contact Mary Schoeppel, at 812-547-7051.